

App. No. 09/506,318
Office Action Dated April 21, 2005

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Claims 13, 25, 39, and 51 are hereby amended. Claims 67-70 are new.

The amendment of claims 13, 25, 39, and 51 is supported by page 3, lines 5-10 and 26-27, page 4, lines 1-4 and 26-28, page 5, lines 27-30 and page 6, line 31 to page 7, line 5. New claims 67-70 are supported by page 6, lines 34-36.

In the present invention, the relatively high melting inorganic binder securely binds the short fibers and provides improved thermal resistance. For example, the intersections of the short fibers of the fabric remain securely bound by the inorganic binder during the curing processes for the relatively low melting varnish, thereby avoiding deformation of the fabric during the processing, which can be caused when the fabric is subjected to pressing in a condition where the binder has been loosened.

Claims 13-14, 16-24, 37, 39-50, 63, and 65 were rejected as being anticipated by or, in the alternative, unpatentable over Barron (US 6,030,575). Applicants traverse this rejection.

Barron neither discloses nor suggests the circuit board prepreg of claims 13 and 39. As is understood from the "Background" section and lines 16-20 of Col. 11, Barron is directed to a technique for improving the moldability of resin-impregnated mats to form products such as automobile bumpers and computer housings. Barron seeks to make such mats more easily applicable to a variety of products by forming the mat into a preliminary stage before subjecting it to the final molding process. To this end, Barron provides a binder that is solid at room temperature so that the mat will retain the preliminary shape while it is transferred to the final molding stage. Naturally, the core teaching of Barron is to use a binder that should release during the molding steps so that the mat can assume the desired shape. This is in direct contrast to the present invention, where the binder is selected so that it can resist deformation during the resin cure processing.

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Claims 13 and 39 require the insulating inorganic binder to have having a higher softening temperature than that of the resin varnish impregnated therein. As noted above, the invention of claims 13 and 39 solves the conventional problem of a binder softening or melting due to heating during the heat pressing process of manufacturing, whereby the binder loses its shape-holding power and allows distortion caused by pressure of the press or by force due to curing shrinkage of the resin varnish. In contrast, Barron is concerned having the mat retain its shape before it reaches the molding stage.

Further, new claims 67-70 require that the softening temperature of the inorganic binder is 350°C or more, which is significantly higher than the typical processing temperatures for resin varnish. Again, Barron is not concerned with the binder acting to maintain the shape of the fabric during the subsequent processing, and therefore Barron provides no motivation for the combination of materials required by claims 67-70.

Favorable reconsideration of claims 13-14, 16-24, 37, 39-50, 63, and 65 and examination of new claims 67-70 are requested.

Claims 22, 25-26, 28-36, 38, 47, 51-62, 64, and 66 were rejected as being unpatentable over Barron and further in view of Sakai (EP 0 807 703). Applicants traverse this rejection. Claims 22 and 47 should be reconsidered allowable for at least the same reasons as claims 13 and 39, from which they depend. Sakai does not remedy the deficiencies of Barron for the remaining claims for reasons analogous to those presented above. Applicants are not conceding the correctness of the rejection.

Claims 13-14, 16-24, 37, 39-50, 63, and 65 were rejected as being unpatentable over Barron in view of Applicant's Disclosure. Applicants traverse this rejection. Claims 14, 16-24, 37, 40-50, 63, and 65 should be reconsidered allowable for at least the same reasons as claims 13 and 39, from which they depend. Applicant's Disclosure does not remedy the deficiencies of Barron for the remaining claims, as previously noted. Applicants are not conceding the correctness of the rejection.

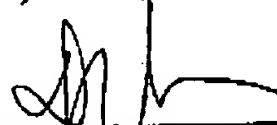
Claims 22, 25-26, 28-36, 38, 47, 51-62, 64, and 66 were rejected as being unpatentable over Barron, in view of Applicant's Disclosure, and further in view of Sakai. Applicants traverse this rejection. Claims 22, 25-26, 28-36, 38, 47, 51-62, 64, and 66 should be reconsidered allowable for at least the same reasons as claims 13, 25, 39, 51, from which they depend.

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Applicant's Disclosure and Sakai do not remedy the deficiencies of Barron, as previously noted.
Applicants are not conceding the correctness of the rejection.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612)455-3804.

Respectfully Submitted,



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